

New Spray System Helps Beef Processor Improve Product Quality and Increase Revenue by US\$60,000 Annually



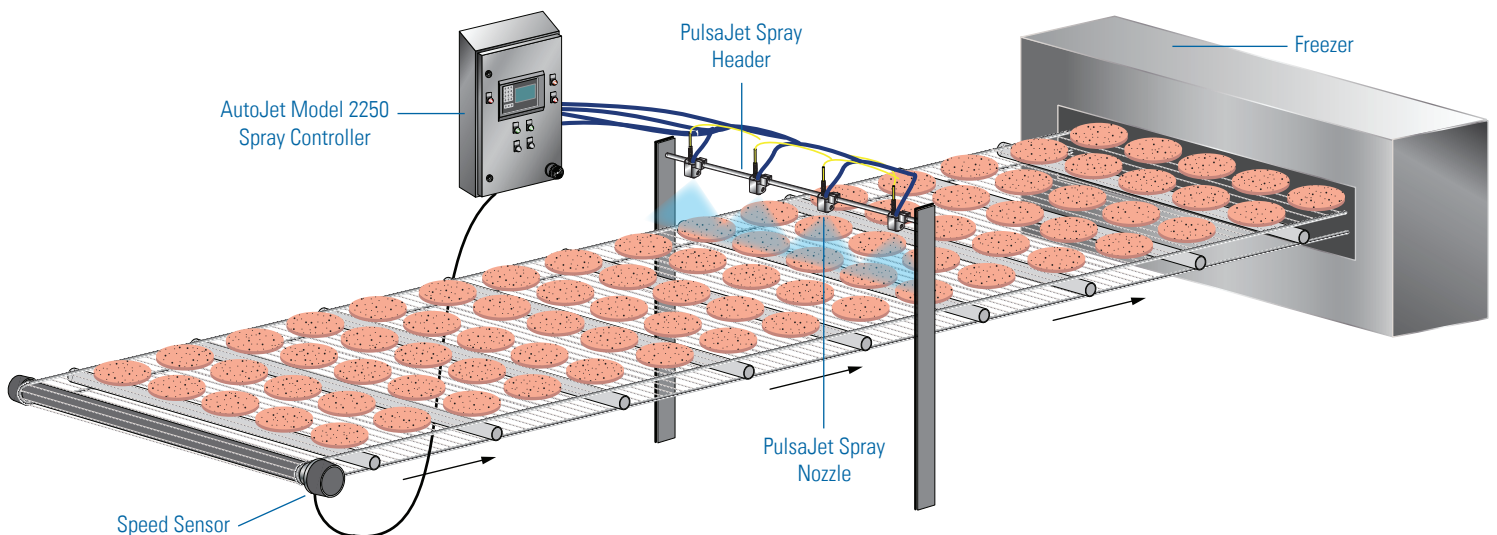
Problem:

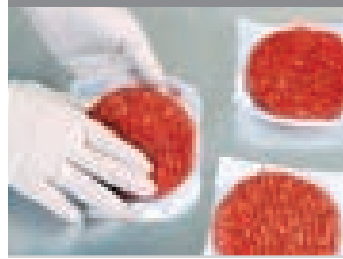
A beef processor needed to apply water to beef patties prior to freezing in order to improve cooking and to maintain the proper weight. Government regulations require that the weight of the water added to the patties does not exceed the weight of the moisture lost during the freezing process. Line speed variations of up to 50% occurred regularly during processing. Unable to find a system that could automatically adjust to line speed and apply the proper amount of water, the processor was forced to skip adding water to the patties to offset the moisture loss in the freezer. Beef patties are sold based on weight and this caused a significant revenue loss for the processor.

Solution:

Spraying Systems Co. used an AutoJet® Spray System equipped with four PulsaJet® automatic spray nozzles to solve the processor's problem. AutoJet Model 2250 Spray Controller adjusts the flow rate of the nozzles based on the line speed reported by the system's conveyor speed sensor.

By adjusting the electrically-actuated PulsaJet nozzles, precise flow rate adjustments can be made instantaneously as line speed varies from 40 to 60 ft./min. (12 to 18 m/min.). Precision Spray Control (PSC) adjustments ensure the proper volume of water is added to each beef patty.





New Spray System Helps Beef Processor Improve Product Quality and Increase Revenue by US\$60,000 Annually – Continued

Results:

The AutoJet® Spray System provides an accurate, verifiable method for adding a precise volume of water to the beef patties. In addition to improving product quality for the processor's foodservice customers, the spray system has a positive impact on revenue. Based on wholesale prices, the additional weight of the beef patties generates more than US\$5,000 in additional revenue per month. The payback period on the AutoJet Spray System was less than six months.

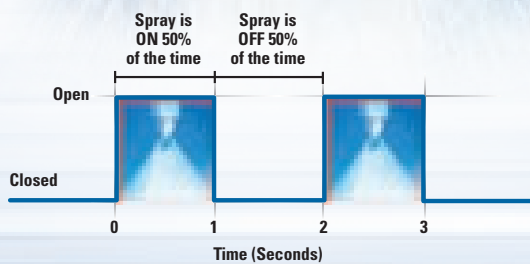
A CLOSER LOOK AT THE SYSTEM

Four PulsaJet® automatic spray nozzles are mounted above the 32" (813 mm) conveyor.

AutoJet Model 2250 Spray Controller provides easy control of nozzles and cycle times up to 16,000 cycles per minute.



Precision Spray Control



Precision Spray Control (PSC) involves switching spray nozzles on and off very quickly in order to control the flow rate. This cycling takes place so quickly that the flow often appears to be constant. PSC requires the use of electrically-actuated nozzles and an AutoJet spray controller.

The Benefits of Precision Spray Control

- Achieve a wide range of flow rates from a single nozzle at a constant pressure. By adjusting duty cycle and cycling frequency instead of changing pressure to increase flow rate, spray angle and drop size remain consistent.
- Flow rate can be changed almost instantaneously.
- Reduced clogging. PSC can maintain very low flows with larger spray orifices.



Spraying Systems Co.®
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